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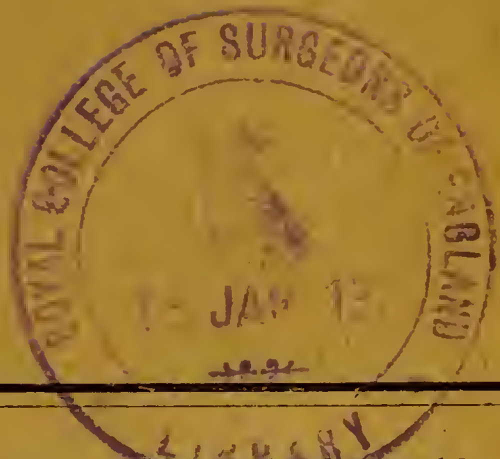

REPORT OF TWO SUCCESSFUL NEPHRECTOMIES.

By GEORGE BEN. JOHNSTON, M. D.,

Richmond, Va.,

Professor of Gynecology and Abdominal Surgery, Medical College of Virginia; Fellow of the American Surgical Association: Member of the Southern Surgical and Gynecological Association, etc.

Read before the Tri-State Medical Association of the Carolinas and Virginia at its first annual session, Charlotte, N. C., January 18-20, 1899.

REPORT OF TWO SUCCESSFUL NEPHRECTOMIES.*

By George Ben. Johnston, M. D., Richmond, Va.

Professor of Gynecology and Abdominal Surgery, Medical College of Virginia.

The two specimens which I present for your inspection are from a considerable collection obtained during the course of a large number of operations on the kidneys. I do not offer them because they are unusually rare but because they are fine specimens of their types and chiefly because the troubles for which these kidneys were removed grew out of mobility of the organ and illustrate dangers to which I directed the attention of the profession in a paper on movable kidney presented to the Southern Surgical and Gynecological Association several years ago.

Case I.—*Nephrectomy for cyst of right (movable) kidney. Recovery.*—Case referred by Dr. Moses D. Hoge. Mrs. J. P. A., aged 60 years. About fifteen years ago patient herself noticed a movable tumor on the right side of the abdomen, and, on calling the attention of her family physician to this, the latter diagnosticated movable kidney. Since that time patient has suffered with intermittent attacks of gastric and nervous nature. These have gradually become more frequent and severe, and had been especially annoying during the twelve months preceding the time at which I was called in consultation. Rapid increase in size of tumor for past eight months, and this increase especially pronounced during past two weeks. Patient not confined to bed. Complains of numbness of lower extremities, especially on right side. Appetite good. Bowels and urination regular.

When I first saw this case, in consultation with Dr. H. H. Levy, the diagnosis was made of movable kidney with probable hydronephrosis, and it was thought that only a nephrectomy would afford a cure. Before undertaking this an

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examination of the urine was made to determine the adequacy of the other kidney to carry on the function of both organs. This examination showed such a marked diminution in the amount of urea eliminated that I advised against immediate operation, deeming it best to obtain further information on this point. The patient then passed into the hands of Dr. Hoge, with whom I again saw the case in consultation. By this time the excretion of urea had more nearly approached the normal and operation was advised.

The patient was admitted to the Old Dominion Hospital on November 14, 1898. Examination through relaxed abdominal wall revealed the presence of a large, smooth, globular, freely-movable fluctuating tumor in the region of the right kidney, which was thought to be either a hydronephrotic kidney or a cyst of that organ.

Operation.—November 15, 1898. Chloroform anesthesia. Langenbeck's incision. As soon as the peritoneal cavity was opened the left kidney was searched for and found to be present. It was much hypertrophied. The intestines were then displaced to the left and padded away with gauze sheets. The posterior layer of peritoneum was incised and the cystic kidney liberated. The vessels and ureter were ligated separately with heavy, chromicized catgut. There was practically no bleeding. The slit in the peritoneum was closed with a running suture of fine catgut. The abdominal wound was closed with through-and-through sutures of silkworm catgut. An impervious dressing, consisting of gauze covered by a layer of muslin saturated in flexible collodion, was applied. No drainage. The patient was on the operating table only twenty-eight minutes. During this time sixteen ounces of normal salt solution were infused into the subclavicular region.

Reaction was prompt and recovery was without event. This patient left the hospital in two weeks from the day of operation.

The kidney after removal presented a large cyst, with very thin walls, containing 600 cc. of clear fluid. [Plate I.] A very small amount of apparently healthy kidney tissue remained. Microscopic examination of the unaffected portion was made by Dr. Moses D. Hoge, by whom the case had been

referred to me, and he submitted to me the following report: The kidney and sac with its fluid contents were placed entire in a formalin solution. A small piece of the kidney substance near the junction of the sac with the healthy portion of the organ was removed for microscopic examination. The tissue was hardened in alcohol, embedded in paraffin, sectioned on the microtome, stained with indigo-carmine and mounted in balsam in the usual way. The fibrous capsule was considerably thickened and firmly attached to the kidney; the walls of the veins were unusually thin, while those of the arteries were considerably thickened, especially the intima. The venous system was empty; the arterial, filled with blood. The glomeruli were somewhat compressed and did not fill Bowman's capsule. The lining epithelium of the excreting tubules was intact, showing no change from the normal. A few patches, small in extent, of connective tissue were noted.

Comments.—Several forms of cysts of the kidney are recognized, of which the conglomerate cysts (or cystic metamorphosis), simple cysts, and hydatid cysts are the most important. The first of these is frequently congenital and is usually a bilateral affection, the latter fact rendering operation unavailable. Furthermore, nephrectomy, which would be the only operation to be considered, is not commonly indicated for the reason that there usually remains a considerable amount of fairly normal kidney tissue, which is capable of serving a useful purpose.

Simple cysts, of which the case here cited is an instance, are more amenable to surgical treatment. When of small size, and when situated in an otherwise healthy kidney, surgical intervention is not indicated. At other times repeated aspirations may finally cause disappearance of the cyst, but this procedure should seldom be resorted to. Again, incision and drainage may be indicated.

In the case here reported none of the above-mentioned procedures were deemed advisable on account of the fact that the kidney was a movable one and the amount of healthy secreting surface remaining was not sufficient in amount to make its preservation desirable.

Hydatid cysts of the kidney are of rather infrequent occurrence, especially in this country.

CASE II.—*Nephrectomy of left kidney (movable) for suppurative disease, with calculus. Recovery.*—Mrs. M. E. L., white, aged 38 years. Married nine years, has had three children. No miscarriage. Consulted me December 5, 1898, and gave following history: Was reasonably healthy as a girl. Was tardy in commencing to menstruate, beginning at eighteen. Periods always regular and painless. When twenty began to experience vague pains in region of the left kidney. These pains were never continuous nor lancinating but sometimes severe, at no time, however, requiring morphine for their relief. Frequent attacks of "wind colic," sometimes nausea and vomiting and great nervousness. All symptoms aggravated during menstruation. Never had kidney colic nor passed bloody urine.

In July, 1897, while rubbing her side with a liniment she detected a lump. The lump was hard to the touch but not tender. Did not consult physician. Never had rigors, fever or sweats. Noticed no pus or blood in the urine. Physical examination showed quite a large tumor below the short ribs, occupying the left side of the abdomen. It was freely movable in every direction.

The question was to determine whether this tumor was one of the spleen or of the kidney. To throw further light on this question my colleague, Dr. E. C. Levy, made examinations of the blood and urine and submitted to me the following report: The blood examination showed 4,360,000 red cells and 12,000 leucocytes to the cubic millimeter. Hemoglobin 55 per cent. of normal. No hematozoa malariæ. The increased number of leucocytes were of the polymorphonulear neutrophile variety. This examination, while not exluding all question of the abdominal tumor being an enlarged spleen, at least showed that it was not a leukemic spleen and to some extent excluded a malarial spleen. After examining the urine and finding in it pus from the kidney, the leucocytosis was explained by the suppuration.

The urine was cloudy, markedly acid, with a specific gravity of 1.015, and contained a small amount of albumin. Microscopic examination of the sediment obtained by means of the centrifuge showed the presence of amorphous urates, a moderate number of leucocytes, and a few red blood cells.

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PLATE I.—CASE I. Cystic Kidney. *a*, Cyst; *b*, Remaining healthy kidney substance.

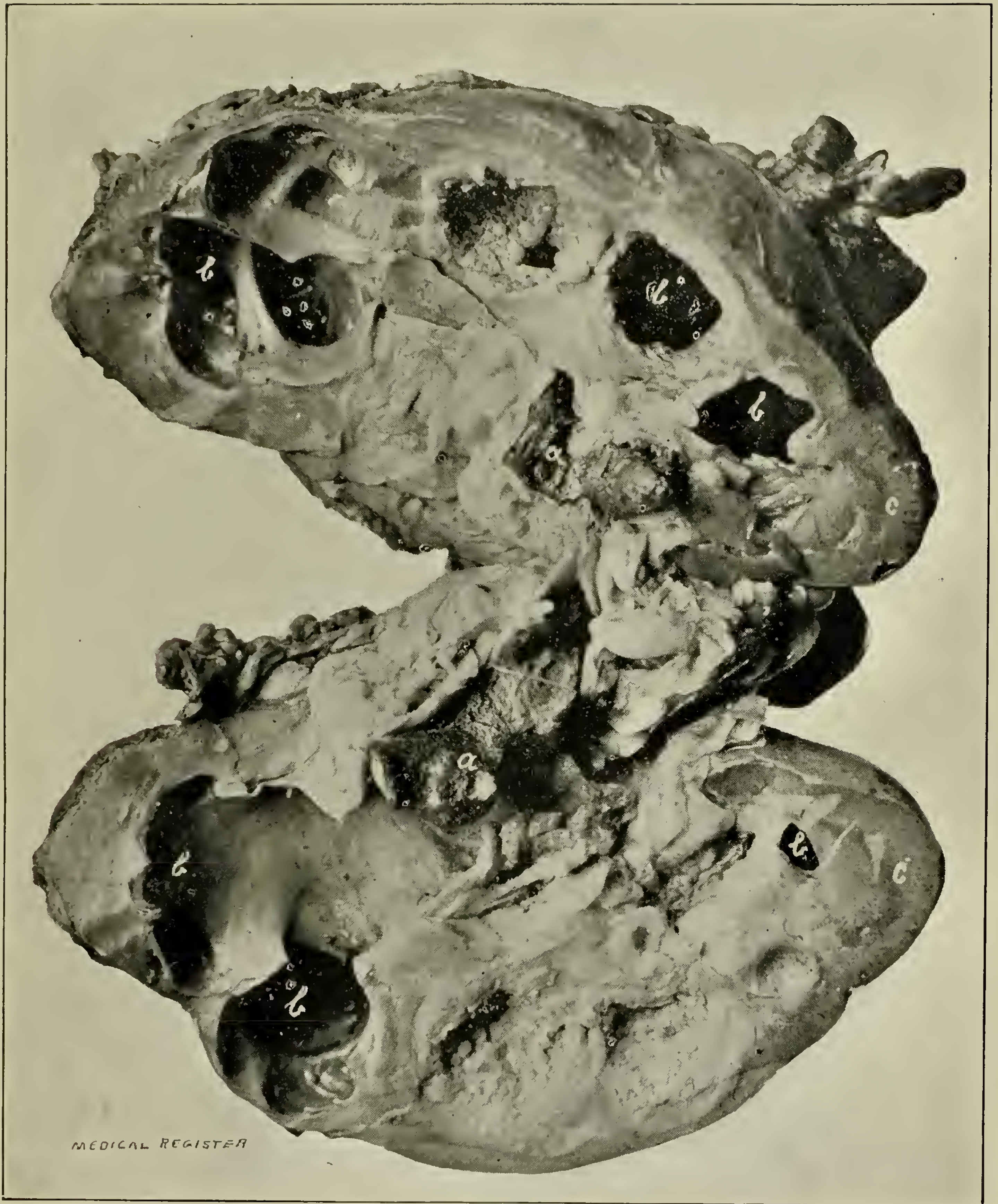
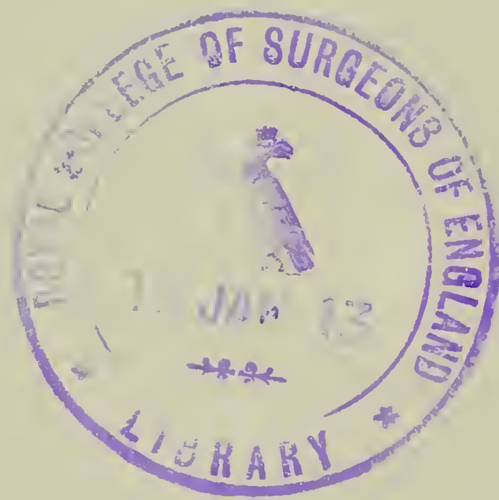


PLATE II.—CASE II. Renal Calculus and Pyo-Nephrosis. *a*, *a*, Calculus; *b*, *b*, *b*, Abscess Cavities; *c*, *c*, Healthy kidney substance.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The presence of pus in a frankly acid urine was considered indicative of its renal origin. Hence the findings in the examinations of the blood and urine in this case led to the opinion that the abdominal tumor was an enlarged and suppurating kidney (most probably from a calculus) rather than an enlarged spleen.

On December 10, 1898, I operated on this case at the Old Dominion Hospital, in the presence of the class of the Medical College of Virginia. The tumor seemed too large to extract through a lumbar incision. I therefore executed a transperitoneal operation through Langenbeck's incision of the left side. Right kidney examined and found normal, except hypertrophied. Intestines displayed to the right and protected by gauze sheets. Posterior layer of peritoneum incised. The freeing of the kidney was rendered tedious and difficult by many adhesions. The pedicle was ligated in sections, vessels and ureter separately.

Considerable oozing occurred and for this reason drainage was established by means of a rubber tube passed through an incision made in the loin. The rent in the peritoneum was closed with a continuous catgut suture and the abdominal wound with silkworm gut and dressed as in Case I.

The kidney after removal was found to weigh 435 grams, was of irregular shape and somwhat nodular appearance. [Plate II.] Upon palpation it was felt to contain a large amount of fluid and also a calculus which branched as it extended up from the pelvis of the organ towards the periphery. Upon opening the kidney, 25 cubic centimeters of thick, yellow pus escaped. The large, branching stone (4.5 centimeters in its longest diameter) was exceedingly friable and was found on analysis to consist of calcium phosphate. There were eight distinct abscess cavities, communicating more or less with each other. Only a small area (about 2 centimeters in length) of apparently normal kidney tissue remained at the upper extremity of the organ.

The progress of recovery was reasonably satisfactory. The drain was removed forty-eight hours after the operation. Six days later temperature developed. I reopened the drainage wound and evacuated a considerable collection of pus, after which everything went on smoothly. The patient was discharged thirty-eight days after operation.

Comments.—Stone in the kidney is the commonest surgical affection of this organ and the most treacherous. It simulates so many other conditions that its presence often escapes early detection. When it does not produce rapid disorganization of the kidney it frequently brings about such disturbances and produces such a degree of irritation as to reduce the victim to complete invalidism.

Early surgical intervention is most important. Nephrolithotomy, or the removal of a stone from an otherwise healthy kidney, affords infinite relief and is freer from danger than any other major operation. If a stone should not be found in every case, the condition producing the symptoms for which the operation was undertaken will usually be amenable to operation and result in cure, hence the failure to find stone is immaterial. Every suspected case should be explored.

Nephrectomy will only be required in those cases in which destruction of the kidney in whole or in part has taken place. When it is decided on, the supposed healthy kidney should invariably be first examined by inspection, palpation, and incision if necessary. This is easily accomplished in the transperitoneal operation. By the lumbar route a separate cut is required. Failure to observe this precaution has more than once led surgeons into improper radical steps.

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